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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/608,804	06/30/2003	Nobuko Yamamoto	03500.015716.1	2559

5514 7590 04/01/2009

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EXAMINER	
BAUSCH, SARAE L	

ART UNIT	PAPER NUMBER
1634	

MAIL DATE	DELIVERY MODE
04/01/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/608,804	YAMAMOTO ET AL.	
	Examiner	Art Unit	
	SARAE BAUSCH	1634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 January 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *74-78* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *74-78* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Currently, claims 74-78 are pending in the instant application. Claims 1-73 have been canceled and claim 74 has been amended. This action is written in response to applicant's correspondence submitted 02/01/2008. All the amendments and arguments have been thoroughly reviewed but were found insufficient to place the instantly examined claims in condition for allowance. Any rejections not reiterated in this action have been withdrawn as necessitated by applicant's amendments to the claims. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action. This action is FINAL.

Withdrawn Rejections

2. The rejection of claims 74-76, under 35 USC 102(b) made in section 6, page 4 of the previous office action is withdrawn in view of the amendment to the claims.

3. The rejections of claims 74-75 and 77-78, under 35 U.S.C. 102(b), made in section 8, page 5-6 of the previous office action, is withdrawn in view of the amendment to the claims.

4. The rejections of claims 74-76, under 35 U.S.C. 102(b), made in section 10, page 8-9 of the previous office action, is withdrawn in view of the amendment to the claims.

Maintained Rejections

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an

> international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 74-76 and 78 are rejected under 35 U.S.C. 102(e) as being anticipated by Okamoto et al. (US Patent 6476215 Nov 2002). This rejection was previously presented in the office action mailed 06/13/2008 and has been rewritten to address the amendment to the claims.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

With regard to claim 74, Okamoto et al. teach a preparing a substrate containing three different probes by bubble jet printing followed by hybridization of ssDNA complementary to the probe and detection by fluorescence microscopy (see column 2 lines 36-60, and example 8, column 24, lines 15 through column 26 line 26). Okamoto et al. teach a substrate with square sections and individual spots to define a matrix with samples having different properties (see column 14, lines 1-7). Okamato et al. teach application of two test samples (1 μM ssDNA) and spotted on the array and subject to hybridization. Okamoto et al. teach application of 1 μM ssDNA with a base sequence complementary to DNA of SEQ ID No. 1 (18 base pairs) (second sample) nucleic acids for hybridization reaction (see example 2 and example 8) (spotting predetermined liquid amount of each test sample in each section in such a manner that individual spots in each section are spaced to conduct a complex forming reaction). Okamato et al. teach the respective spots were observed by microscopy (detecting whether a complex formed and is

present or not in each spot). Additionally, Okamoto teaches in example 9 that three types of ssDNA were hybridized to complementary immobilized DNA probes. Specifically Okamoto teaches that to each well where one of the DNA probes was immobilized 100pl/well of the solution containing the corresponding complementary ssDNA was supplied and that it was confirmed that reactant can be supplied separately to each well of the probe array (see column 26 lines 57-60). Thus Okamoto teaches adding a first and second test sample (teaches assaying three ssDNA) to individual separate spots.

With regard to claim 75-76, Okamoto et al. teach application of samples by ink-jet method. Okamoto et al. teach using a bubble jet method (see column 15, lines 29-31).

With regard to claim 78, Okamoto et al. teach a density of 400/cm^2 (see column 14, lines 30-35 and 51-64).

Response to Arguments

7. The response traverses the rejection on page 6 of the remarks mailed 10/02/2008. The response asserts that this reference does not disclose or suggest individual spotting of multiple test samples in each section to create individual spaced spots within a section and the reference teach washing the substrate that has probes attached thereto with hybridization solution. This response has been thoroughly reviewed but not found persuasive. Okamoto teaches in example 9 that three types of ssDNA were hybridized to complementary immobilized DNA probes. Specifically Okamoto teaches that to each well where one of the DNA probes was immobilized 100pl/well of the solution containing the corresponding complementary ssDNA was supplied and that it was confirmed that reactant can be supplied separately to each well of the probe array (see column 26 lines 57-60). Thus Okamoto teaches adding a first and second test sample

(teaches assaying three ssDNA) to individual separate spots. For these reasons, and the reasons made of record in the previous office actions, the rejection is maintained.

New Grounds of Rejection

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 74-75 are rejected under 35 U.S.C. 102(b) as being anticipated by Rava et al. (US Patent 5545531). This rejection is newly presented necessitated by the amendment to the claims.

Rava et al. teach the probe array comprise addressable features, probes that are nucleic acids and teach that the plate can have wells in which the probe array is each test well is the same or different (preparing a detection substrate having a plurality of square sections on a solid substrate with multiple oligonucleotides having different sequences) (see column 2 lines 30-45 and figure 4). Rava et al. teach that a row can have the same array and a column can have a different array (row comprises one square section, column comprises second square section) and teaches applying different test samples to row or column (see column 8, lines 60-67 and column 9 lines 1-5). Rava et al. teach automation of handling fluids, including sample fluids to allow multiple assays to be performed concurrently and allow for consistent handling (claim 75) (See column 7 lines 30-40). Rava et al. teach samples from different patients are introduced into wells of different columns or different wells, thus Rava et al. teach spotting a first and second test sample in each square section at individual separate spots (wells) (see column 9 lines 1-10).

Additionally Rava teach performing multiple tests by introducing samples from patient one in one column and patient two in another column (See column 12 lines 1-12) to detect a complex formation and thus diagnosis a particular disease.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12. Claims 77-78 rejected under 35 U.S.C. 103(a) as being unpatentable over Rava (US Patent 5545531) in view of Brown (US Patent 5807522). This rejection is newly presented necessitated by the amendment to the claims.

Rava et al. teach the probe array comprise addressable features, probes that are nucleic acids and teach that the plate can have wells in which the probe array is each test well is the same or different (preparing a detection substrate having a plurality of square sections on a solid

substrate with multiple oligonucleotides having different sequences) (see column 2 lines 30-45 and figure 4). Rava et al. teach that a row can have the same array and a column can have a different array (row comprises one square section, column comprises second square section) and teaches applying different test samples to row or column (see column 8, lines 60-67 and column 9 lines 1-5). Rava et al. teach automation of handling fluids, including sample fluids to allow multiple assays to be performed concurrently and allow for consistent handling (claim 75) (See column 7 lines 30-40). Rava et al. teach samples from different patients are introduced into wells of different columns or different wells, thus Rava et al. teach spotting a first and second test sample in each square section at individual separate spots (wells) (see column 9 lines 1-10). Additionally Rava teach performing multiple tests by introducing samples from patient one in one column and patient two in another column (See column 12 lines 1-12) to detect a complex formation and thus diagnosis a particular disease. Rava et al. does not teach a square side length of 2 mm or a density of 400 oligonucleotides per centimeter squared.

However, square side lengths of 2 mm and density of 400 oligonucleotides/cm^2 were known in the art and commonly used in nucleic acid hybridization array, as taught by Brown. Brown teaches an array of regions on a solid support comprising a two dimensional array with discrete regions having a finite area (see column 6, lines 29-32) and teach the 96 cell array is about 1 to 30 mm in width and 1 to 50 mm in length and teach an array of regions having a density of at least 100/cm^2 (see column 11, lines 62-67).

Therefore, it would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to include a square section of 2 mm and array density of 400 oligonucleotides/cm^2 of Brown to the substrate of Rava in order to produce an array comprising

square sections of a length and known concentration of oligonucleotide density that was well known in the art as taught by Brown. One of ordinary skill in the art would have been motivated to include square sections of 2 mm and array density of 400 oligonucleotides/cm^2 with the substrate of Rava as taught by Brown because both Brown and Rava teach hybridization of nucleic acid to detect sequences in a nucleic acid sample by nucleic acid hybridization on an array substrate. Furthermore the ordinary artisan would have had a reasonable expectation of success that the square section of 2 mm and array density taught by Brown could be used in the method of Rava as both Brown and Rava use nucleic acid hybridization array detection to detect nucleic acid target sequences.

13. Claim 76 is rejected under 35 U.S.C. 103(a) as being obvious over Rava (US Patent 5545531) in view of Southern (US Patent 5700637). This rejection is newly presented necessitated by the amendment to the claims.

Rava et al. teach the probe array comprise addressable features, probes that are nucleic acids and teach that the plate can have wells in which the probe array is each test well is the same or different (preparing a detection substrate having a plurality of square sections on a solid substrate with multiple oligonucleotides having different sequences) (see column 2 lines 30-45 and figure 4). Rava et al. teach that a row can have the same array and a column can have a different array (row comprises one square section, column comprises second square section) and teaches applying different test samples to row or column (see column 8, lines 60-67 and column 9 lines 1-5). Rava et al. teach automation of handling fluids, including sample fluids to allow multiple assays to be performed concurrently and allow for consistent handling (claim 75) (See column 7 lines 30-40). Rava et al. teach samples from different patients are introduced into

wells of different columns or different wells, thus Rava et al. teach spotting a first and second test sample in each square section at individual separate spots (wells) (see column 9 lines 1-10). Additionally Rava teach performing multiple tests by introducing samples from patient one in one column and patient two in another column (See column 12 lines 1-12) to detect a complex formation and thus diagnosis a particular disease. Rava et al. does not teach the use of an ink-jet method to apply test samples.

However, Southern teaches that ink jet methods of nucleic acids to nucleic acid arrays were well known in the art. Southern teaches that spots can be laid down with a low cost ink jet printer (see column 6 lines 53-56).

Therefore, it would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to include ink jet method of applying samples to nucleic acid array as taught by Southern in the method of Rava. The ordinary artisan would have been motivated to include an ink jet method for applying a sample to the nucleic acid method and array of Rava because Rava teaches automation of handling fluids to allow for multiple assay to be performed concurrently and Southern teaches that spots can be laid down on a nucleic acid array using a low cost ink jet printer for the expected benefit of a low cost method for multiplexing as taught by Southern and Rava. The ordinary artisan would have had a reasonable expectation of success that the use of ink jet method of Southern could be used for application of a sample to the array of Rava because both Rava and Southern teach nucleic acid array hybridization and spotting of nucleic acids on a solid support for detection of nucleic acids.

14. Claims 74-75, 77-78 rejected under 35 U.S.C. 103(a) as being unpatentable over Brown (US Patent 5807522) in view of Rava (US Patent 5545531) This rejection is newly presented necessitated by the amendment to the claims.

Brown et al. teach a method of detecting differential expression of each of a plurality of genes in a first cell type with respect to expression of the same genes in a second cell type (see column 4, lines 52-59). Brown et al. teach mixtures of labeled cDNA from the two cell types is added to an array of polynucleotides representing a plurality of known genes (component from at least two liquid test samples) (see column 4, lines 60-63). Brown et al. teach the array is examined by fluorescence to determine the relative expression of known genes in the two cell types by each spot (determining whether the object component is contained in each of the two liquid test samples) (see column 4, lines 64-67 and column 5, lines 1-5). Brown et al. spotting polynucleotides of about 50 bp on the array surface and a small volume of labeled DNA probe mixture (at least two liquid test samples) in a standard hybridization solution is loaded onto each cell and incubation at appropriate temperatures for hybridization by reaction with detection reagents and analyzed using calorimetric, radioactive, or fluorescent detection (see column 13, lines 10-46). Brown et al. teach 100 DNA fragments representing all known mutations of a given gene fabricated on an array (fixing plural types of oligonucleotides having known base sequence different from one another). Brown et al. teach an array of regions on a solid support comprising a two dimensional array with discrete regions having a finite area (see column 6, lines 29-32) and teach the 96 cell array is about 1 to 30 mm in width and 1 to 50 mm in length (claim 77) (see column 11, lines 62-67). Brown et al. teach an array of regions having a density of at least about $100/cm^2$, thus the square section is 400 oligonucleotides per centimeter square or

less. (see column 6 lines 33-35). Brown et al. teach the array is formed in a plurality of analyte-specific reagent regions, each region may include a different analyte-specific reagent and teach the 96 microarrays assayed with 96 patient samples are incubated, rinsed, detected, and analyzed using standard calorimetric, radioactive, or fluorescent detection and teaches the process can be reversed where the patient or organism's DNA is immobilized as the array elements and each array is hybridized with a different mutated allele or genetic marker (claim 75) (see column 15, lines 18-51). Brown et al. does not teach application of two test samples to individual separate spots.

However, Rava et al. teach a probe array comprise addressable features, probes that are nucleic acids and teach that the plate can have wells in which the probe array is each test well is the same or different (preparing a detection substrate having a plurality of square sections on a solid substrate with multiple oligonucleotides having different sequences) (see column 2 lines 30-45 and figure 4). Rava et al. teach that a row can have the same array and a column can have a different array (row comprises one square section, column comprises second square section) and teaches applying different test samples to row or column (see column 8, lines 60-67 and column 9 lines 1-5). Rava et al. teach automation of handling fluids, including sample fluids to allow multiple assays to be performed concurrently and allow for consistent handling (claim 75) (See column 7 lines 30-40). Rava et al. teach samples from different patients are introduced into wells of different columns or different wells, thus Rava et al. teach spotting a first and second test sample in each square section at individual separate spots (wells) (see column 9 lines 1-10). Additionally Rava teach performing multiple tests by introducing samples from patient one in

one column and patient two in another column (See column 12 lines 1-12) to detect a complex formation and thus diagnosis a particular disease.

Therefore, it would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to include separate application of individual test samples as taught by Rava in the method of nucleic acid hybridization array and nucleic acid detection as taught by Brown. One of ordinary skill in the art would have been motivated to include individual application of test samples to individual wells as taught by Rava in the method of Brown because Rava teaches that application of individual samples to different columns and different wells allows for multiple assay to be performed concurrently and allows for multiple testing of samples. Furthermore the ordinary artisan would have had a reasonable expectation of success that the application of test samples to individual wells as taught by Rava could be used in the method of Brown because both Brown and Rava teach the use of nucleic acid arrays for nucleic acid hybridization and detection of test nucleic acid samples.

15. Claim 76 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brown in view of Rava as applied to claims 74-75 and 77-78 above, and further in view of Southern (US Patent 5700637). This rejection is newly presented necessitated by the amendment to the claims.

The method of Brown in view of Rava is set forth in section 14 above. Brown in view of Rava does not teach application of samples by ink jet method.

However, Southern teaches that ink jet methods of nucleic acids to nucleic acid arrays were well known in the art. Southern teaches that spots can be laid down with a low cost ink jet printer (see column 6 lines 53-56).

Therefore, it would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to include ink jet method of applying samples to nucleic acid array as taught by Southern in the method of Brown in view Rava. The ordinary artisan would have been motivated to include an ink jet method for applying a sample to the nucleic acid method and array of Brown in view Rava because Brown in view of Rava teaches automation of handling fluids to allow for multiple assay to be performed concurrently and Southern teaches that spots can be laid down on a nucleic acid array using a low cost ink jet printer for the expected benefit of a low cost method for multiplexing as taught by Southern and Brown in view of Rava. The ordinary artisan would have had a reasonable expectation of success that the use of ink jet method of Southern could be used for application of a sample to the array of Brown in view of Rava because both Brown in view of Rava and Southern teach nucleic acid array hybridization and spotting of nucleic acids on a solid support for detection of nucleic acids.

16. Claim 77 is rejected under 35 U.S.C. 103(a) as being obvious over Okamoto (US Patent 6476215) in view of Brown et al. (US Patent 5807522). This rejection is newly presented necessitated by the amendment to the claims.

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter

disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(l)(1) and § 706.02(l)(2).

Okamoto et al. teach a preparing a substrate containing three different probes by bubble jet printing followed by hybridization of ssDNA complementary to the probe and detection by fluorescence microscopy (see column 2 lines 36-60, and example 8, column 24, lines 15 through column 26 line 26). Okamoto et al. teach a substrate with square sections and individual spots to define a matrix with samples having different properties (see column 14, lines 1-7). Okamato et al. teach application of two test samples (1 μM ssDNA) and spotted on the array and subject to hybridization. Okamoto et al. teach application of 1 μM ssDNA with a base sequence complementary to DNA of SEQ ID No. 1 (18 base pairs) (second sample) nucleic acids for hybridization reaction (see example 2 and example 8) (spotting predetermined liquid amount of each test sample in each section in such a manner that individual spots in each section are spaced to conduct a complex forming reaction). Okamato et al. teach the respective spots were observed by microscopy (detecting whether a complex formed and is present or not in each spot). Additionally, Okamoto teaches in example 9 that three types of ssDNA were hybridized to complementary immobilized DNA probes. Specifically Okamoto teaches that to each well where one of the DNA probes was immobilized 100pl/well of the solution containing the

corresponding complementary ssDNA was supplied and that it was confirmed that reactant can be supplied separately to each well of the probe array (see column 26 lines 57-60). Thus Okamoto teaches adding a first and second test sample (teaches assaying three ssDNA) to individual separate spots. Okamoto does not teach a side length of 2 mm.

However, Brown et al. teach a method of detecting differential expression of each of a plurality of genes in a first cell type with respect to expression of the same genes in a second cell type (see column 4, lines 52-59). Brown et al. teach mixtures of labeled cDNA from the two cell types is added to an array of polynucleotides representing a plurality of known genes (component from at least two liquid test samples) (see column 4, lines 60-63). Brown et al. teach an array of regions on a solid support comprising a two dimensional array with discrete regions having a finite area (see column 6, lines 29-32) and teach the 96 cell array is about 1 to 30 mm in width and 1 to 50 mm in length (claim 77) (see column 11, lines 62-67).

Therefore, it would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to include in the method of detecting a complex formed between a sample and probe on a nucleic acid by hybridization as taught by Okamoto to include a DNA array with a square section of 2 mm as taught by Brown. The ordinary artisan would have been motivated to include a square length of 2 mm in the method of nucleic acid hybridization on an array substrate as taught by Okamoto because both Okamoto and Brown teach nucleic acid hybridization on an array and thus the skilled artisan would have been motivated to generate a square section of 2 mm as taught by Brown as was known in the art and would generate a predictable result of an array that hybridizes nucleic acids. The ordinary artisan would have had a reasonable expectation of success that the use of an array with a square section of 2 mm could

be used in the method of Okamoto because both Brown and Okamoto teach hybridization of nucleic acids using square sections on a microarray, thus the ordinary artisan would have had a reasonable expectation of success that 2 mm square section on the array of Okamoto would achieve the predictable result of nucleic acid hybridization detection as taught by Brown.

Conclusion

17. No claims are allowable.

18. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SARAE BAUSCH whose telephone number is (571)272-2912. The examiner can normally be reached on M-F 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ram Shukla can be reached on (571) 272-0735. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to (571) 272-0547.

Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public.

For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199.

/Sarae Bausch/
Primary Examiner, Art Unit 1634